



Regional Spillover Effects of Mataram City Growth on Economic Development in Lombok Barat Regency, Indonesia

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Abstract. This research aims to analyze the spillover effect of Mataram City's growth center on the economic growth rate of the hinterland region, specifically Lombok Barat Regency. The independent variables include domestic investment in Mataram City (X1) and Mataram City's economic growth rate (X2), while the dependent variable is the economic growth rate of Lombok Barat Regency (Y). The study utilizes time-series secondary data from publications by the Central Statistics Agency (BPS) and other relevant agencies in Nusa Tenggara Barat, covering the period from 2010 to 2022. The Ordinary Least Squares (OLS) method is employed for analysis. The findings reveal that the independent variables in this study account for 98.50 percent of the variance in the dependent variable, while the remaining 1.50 percent is influenced by factors outside the estimation model. On a partial basis, domestic investment in Mataram City does not have a significant effect on the economic growth rate of Lombok Barat Regency, indicating that this variable does not contribute to a positive economic spillover effect. However, the economic growth rate of Mataram City has a positive and significant impact on the economic growth of Lombok Barat Regency, suggesting that it contributes a positive spillover effect. Simultaneously, the combined influence of domestic investment and Mataram City's economic growth rate has a positive spillover effect on Lombok Barat Regency's economy.

Keywords: Spillover Effect, Economic Growth, Domestic Investment, Lombok Barat Regency, Ordinary Least Squares Method.

1. INTRODUCTION

Economic development is a process aimed at improving the welfare of people within a country or region [1]. According to Zunaidi et al. [2], economic development refers to a long-term process in which a nation's per capita income increases, provided that the number of people living below the "absolute poverty line" does not rise, and income distribution does not become more unequal. Furthermore, Amar and Pratama [3], argue that economic development extends beyond income growth. It involves significant changes in social structure, public attitudes, national institutions, and accelerated economic growth.

Economic growth, in contrast, focuses on the increase in output or the production of goods and services in a region, driven by heightened economic activity over a specific period. It reflects an overall increase in income, represented by the added value generated within the region [4]. Barman [5] defines economic growth as changes in the level of the economy occurring year by year, measured through income comparison over time, commonly known as the rate of economic growth. Several indicators measure economic growth, including Gross Domestic Product (GDP) and GDP per capita (per capita income). GDP reflects the total value of final goods and services produced by an economy within a year, expressed in market prices, while GDP per capita represents GDP divided by the population, more accurately reflecting the population's welfare compared to GDP alone.

One major challenge in the economic development of developing countries, including Indonesia, is income inequality. This disparity creates imbalances in the success of economic development across regions, with certain areas experiencing rapid economic growth while others lag behind. High-income regions coexisting with low-income ones exacerbate this condition [6]. To address income inequality, regional development policies are implemented. Regional development strategies aim to

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reduce disparities by effectively and sustainably utilizing existing resources [7]. A common regional development policy involves designating specific cities or regions as growth centers.

Growth centers function as primary engines of development, with the expectation that growth will spread to surrounding areas, generating positive spillover effects [8]. Functionally, growth centers represent dynamic concentrations of economic activities, while geographically, they are well-facilitated and accessible locations that attract diverse business interests. Growth centers are expected to generate positive spillover effects (spread effects) in surrounding areas [9]. However, they may also produce negative spillover effects (backwash effects), concentrating economic activities in the center and exacerbating regional inequality. This dual impact remains a subject of debate in regional economic theory.

Mataram City serves as a growth center for Nusa Tenggara Barat Province, playing a vital role in regional economic development [10]. However, the extent to which the economic growth of Mataram City influences its surrounding regions, such as Lombok Barat Regency, requires further investigation. Understanding the impact of growth centers on hinterland regions is a critical and timely research topic in the field of regional economic development, offering insights into the potential benefits and challenges of growth center policies. Despite the recognized role of growth centers in promoting regional economic development, empirical studies on their specific spillover effects, particularly in Indonesia, remain limited. Existing literature primarily focuses on the economic growth of growth centers themselves, with less attention paid to how this growth influences surrounding hinterland regions [11], [12]. Moreover, many studies address general economic indicators, but few examine the distinct roles of variables like domestic investment (PMDN) and regional economic growth rates in producing spillover effects. In the context of Mataram City and Lombok Barat Regency, there is a clear gap in understanding how Mataram's growth impacts the economic development of its neighboring areas. Most studies have not delved into the combined effects of domestic investment and economic growth in growth centers on the hinterland's economic performance.

This research fills the gap by investigating the specific spillover effect of Mataram City's growth on Lombok Barat Regency, focusing on PMDN investment and the economic growth rate of Mataram City as key independent variables. By utilizing secondary data from 2010 to 2022 and applying the Ordinary Least Squares (OLS) method, this study provides a novel contribution to understanding the dynamic interaction between a growth center and its hinterland. The objectives of this research are to: (1) analyze the impact of PMDN investment in Mataram City on the economic growth rate of Lombok Barat Regency, (2) assess the effect of Mataram City's economic growth rate on Lombok Barat's development, and (3) evaluate the simultaneous effects of these variables on the economic growth of Lombok Barat Regency.

2. METHOD

This research employs an associative quantitative method to determine the relationship between the independent and dependent variables, aiming to develop a theory that explains certain economic phenomena. The study focuses on Mataram City and Lombok Barat Regency, covering a 13-year period from 2010 to 2022. Data were collected through a literature review of various sources, including publications from the Central Bureau of Statistics (BPS), the Investment Office, and other relevant literature. The data collection techniques used involve documentation from BPS publications, as well as secondary sources such as scientific papers, books, and articles. The study utilizes time series data spanning 13 years. The research variables consist of independent variables—PMDN (domestic investment) in Mataram City and the economic growth rate of Mataram City—and the dependent variable, which is the economic growth rate of Lombok Barat Regency. Detailed operational definitions of these variables, including measurements and units, are provided.

The data collection process involved gathering documented data from various sources, including BPS publications, websites, and related literature. The analysis was conducted using a multiple regression approach, applying the OLS model. The independent variables in the model are PMDN investment and the economic growth rate of Mataram City, while the dependent variable is the economic growth rate of Lombok

Barat Regency. To ensure the validity of the regression results, classical assumption tests were performed, including multicollinearity, normality, heteroscedasticity, and autocorrelation tests. Additionally, statistical tests such as the coefficient of determination (R^2), t-test, and F-test were used to evaluate the significance of the variables in the model. These tests help assess the explanatory power of the model and the individual contributions of each independent variable to the dependent variable.

3. RESULT AND DISCUSSION

3.1 Development of Economic Growth in Lombok Barat Regency

The economic growth rate of the Regency in this study is economic growth based on changes in the value of GRDP at constant prices in that year and compared to the previous year. GRDP at constant (real) prices can be used to show the rate of economic growth from year to year. The following is the development of economic growth in Lombok Barat Regency from 2010-2022:

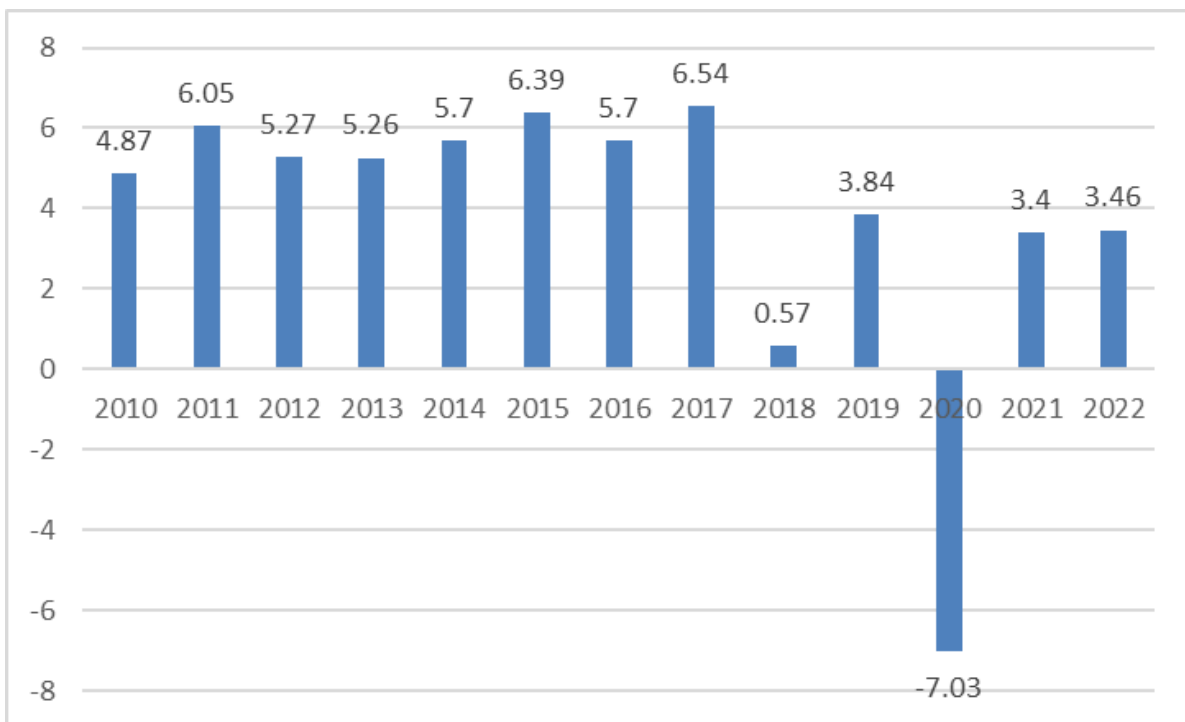


Figure 1 Economic Growth Rate of Lombok Barat Regency in 2010-2022 (Percent)

Based on **Figure 1**, the economic growth rate for Lombok Barat in the 2010 and 2011 periods fluctuated significantly. In 2010, the growth rate was recorded at 4.87 percent, followed by a substantial increase in 2011, reaching 6.05 percent. From 2012 to 2017, the economic growth rate of Lombok Barat remained consistently above 5 percent annually, with the highest growth occurring in 2017, when it reached 6.54 percent. This growth was driven by the development of the manufacturing sector, as well as the construction of economic infrastructure, trade facilities, public amenities, and residential areas [13].

However, in 2018, the island of Lombok was struck by a devastating earthquake, which caused a significant contraction in economic growth across all regions of Nusa Tenggara Barat. Lombok Barat experienced a contraction of 0.57 percent. Despite this setback, the region was able to stabilize its economic conditions, achieving a growth rate of 3.84 percent in 2019. In 2020, Lombok Barat's economic growth suffered an extreme contraction, plummeting to -7.03 percent due to the global Covid-19 pandemic, which severely impacted all sectors of the economy. By 2021, economic growth began to recover, reaching 3.40 percent, and continued to improve into 2022, with an increase of 0.6 percent, bringing the growth rate to 3.46 percent.

3.2 Development of PMDN Investment in Mataram City

Domestic investment in this study refers to the total investment in Mataram City over a 13-year period, from 2010 to 2022. The primary goal of PMDN (Domestic Investment) is to stimulate domestic economic

growth, create employment opportunities, increase household incomes, and support overall economic development in the Mataram City area. The appeal of Mataram City as an investment destination stems from its status as a hub for education, government, entertainment, and shopping centers.

The impact of PMDN investment is not limited to Mataram City alone but also extends to the neighboring hinterland region, Lombok Barat Regency, due to its geographical proximity. The spillover effects of investment in Mataram City can have a significant influence on the economic activities and welfare of the population in Lombok Barat. Below is the data on the realization of domestic investment (PMDN) in Mataram City from 2010 to 2022.

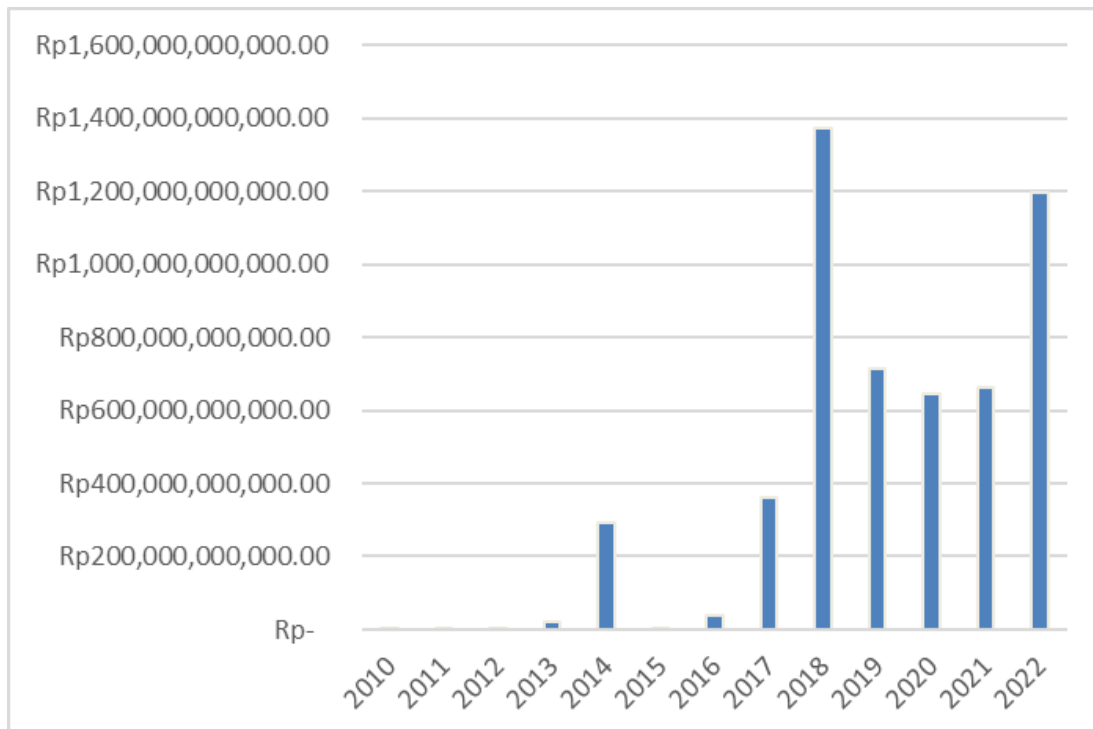


Figure 2 Development of PMDN Investment Realization in Mataram City Year 2010-2022 (Rp)

As shown in **Figure 2**, the realization of PMDN in Mataram City fluctuates each year. In 2010, the total PMDN investment realization in Mataram City was Rp. 790,000,000. In 2011, the investment realization increased to Rp. 3,157,602.00. However, in 2012, the realization dropped to Rp. 431,135,551.00. In 2013, it rose again to Rp. 20,000,000,000.00, and by 2014, the amount of PMDN investment realization surged further to Rp. 292,714,095,617.00. This was followed by a decline in 2015, with the investment realization falling to Rp. 972,082,817.00. In 2016, the investment in Mataram City reached Rp. 39,348,818,226.00, and it continued to grow, peaking in 2018 at Rp. 1,374,331,424,377.00.

However, investment declined in 2019, with a total realization of Rp. 714,089,747,388.00, and this downward trend continued through 2020 and 2021, with amounts of Rp. 647,135,350,571.00 and Rp. 663,787,502,788.00, respectively. Nevertheless, in 2022, PMDN investment saw a substantial increase, reaching Rp. 1,195,125,116,786.00. The notable fluctuations in PMDN investment each year are largely attributed to the investment calculation system used by the One-Door Integrated Service Investment Office of West Nusa Tenggara Province and the reporting system employed by individual investors in Mataram City. For instance, in the first year, an investor might report a project that includes the initial stages of development, such as land acquisition, materials, and so on. In the second year, however, the investor may not report the same items, resulting in variations in the reported investment values from year to year. Additionally, local government policies during a given period also influence the amount of investment realization.

3.3 Development of Economic Growth in Mataram City

The economic growth rate of Mataram City in this study is economic growth based on changes in GRDP value at constant prices of the year concerned against the previous year. The economic growth rate of

Mataram City is an independent variable that represents the variable spillover effect. The development of the Mataram City Growth Rate from 2010-2022 can be seen in **Figure 3**. It can be seen in **Figure 3** above that the economic growth of Mataram City in 2010 and 2011 was relatively stable with an average growth of 7.81 percent per year. This is indicated by economic growth in 2010 of 7.95 percent and slowed down with growth of 7.67 percent in 2011. In 2012 there was a fairly extreme decline because economic growth reached 3.02 percent. However, it increased again to reach 8.05 percent in 2013.

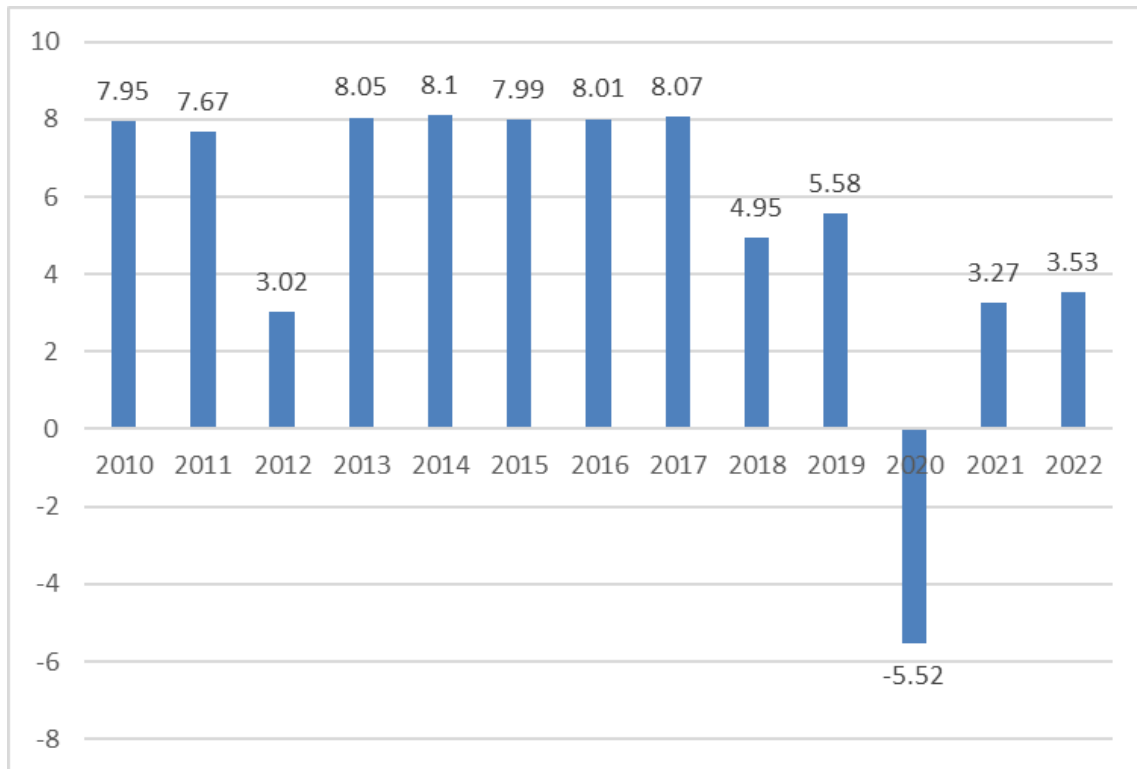


Figure 3 Economic Growth Rate of Mataram City 2010-2022 (%)

In the period 2013-2017, the economy of Mataram City also looked relatively stable with an average growth of 8.04 percent per year, better than the previous period. However, in 2018 there was a decline in growth of 4.95 percent, this was due to the earthquake that hit Lombok and had an impact on slowing growth in all economic sectors. However, Mataram City continues to strengthen in all sectors so that in 2019 the economic growth of Mataram City increased again at 5.58 percent.

Not long after the earthquake, the world was hit by a deadly virus, namely Covid-19, not only affecting public health but also greatly affecting the economic sector, even in 2020 the economic activity of the community can be said to be completely dead. This is due to government policies to reduce the spread of Covid-19, such as lockdowns, large-scale social restrictions (PSBB) and so on. So that the rate of economic growth throughout the world has experienced an extreme decline, including economic growth in the city of Mataram. In 2020 the economic growth rate of Mataram City experienced an extreme decline to -5.52 percent. The Mataram City Government continues to re-strengthen in all sectors caused by Covid-19, so that in 2021 the economic growth rate of Mataram City can increase again by 3.27 percent even though the Covid-19 case is still ongoing and the economic growth of Mataram City continues to increase in 2022 to 3.53 percent.

3.4 Classical Assumption Test Results

The results of the classical assumption test can be seen in **Table 1**.

Table 1. Classical Assumption Test Results

Variable	Centered VIF	Jarque-Bera Prob.	Prob Chi-Square Obs*	R.Square	Prob Chi-Square
Log X1	1.101	0.357 > 0.05	0.3663 > 0.05		0.8998 > 0.05
Log X2	1.101				

Based on the results of the multicollinearity test analysis in this study, it is known that each independent variable, namely the amount of PMDN Investment (X1) and the Economic Growth Rate of Mataram City (X2) has a VIF value <10, it can be concluded that there is no multicollinearity in this study. Based on the results of the regression analysis in this study, the prob jarque bera value is 0.357, which means that the value is greater than the real level value of 0.05. It can be concluded that the data in this study passed the normality test.

Based on the regression analysis that has been carried out, the result of the prob chi-square obs * R.square value is 0.3663, which means that the value is greater than 0.05. So it can be concluded that there is no heteroscedasticity problem in this study. The regression results also contain a prob chi-square value of 0.8998 which means that this value is greater than the level value of 0.05. So it can be concluded that in this study there is no autocorrelation problem.

3.5 Multiple Linear Regression Analysis Results

To analyze the effect of each independent variable on the dependent variable, where PMDN Investment (X1), Economic growth rate (LPE) of Mataram City (X2) on the economic growth rate of Lombok Barat Regency (Y) through multiple linear regression analysis using analytical tools software Eviews 12. Multiple linear regression calculation results of regional analysis spillover effect the growth center of Mataram City on the economic growth rate of the region hinterland (Lombok Barat Regency) can be explained in **Table 2**.

Table 2. Regression Analysis Results

Variable	Coefficient	Std. Error	t-statistic	Prob	Description
Results of the t-test					
PMDN Investment	-0.019	0.024	-0.81	0.43	Not Significant
LPE	1.324	0.053	24.62	0.00	Significant
C	-0.351	0.776	-0.45	0.66	
F Test Results					
PMDN Investment and LPE of Mataram City -> LPE of Lombok Barat Regency				F	Prob.
				341.17	0.00
Coefficient of Determination Results					
R-Square				0.98	
Adj. R-Square				0.98	

Based on table 1 of multiple linear regression results using eviews 12, the estimation results are obtained in the following equation:

$$Y = -0.351031 - (0.019585)X_1 + 1.324136 X_2 \quad (1)$$

Based on the above equation, it shows that the effect of constancy and independent variables, namely the PMDN investment variable (X1) and the economic growth rate of Mataram City (X2) on the dependent variable, namely the economic growth rate of Lombok Barat Regency, is as follows:

1. Constant or intercept

Based on the results of data estimation in the regression analysis above, there is a constant value of -0.351031. This shows that the economic growth rate of Lombok Barat Regency decreases if the variable domestic investment investment in Mataram City and the variable economic growth rate of Mataram City remain constant.

2. The Effect of PMDN Investment in Mataram City (X1) on the Economic Growth Rate of Lombok Barat Regency (Y)

From the regression results above, it is found that PMDN investment in Mataram City has no effect on the economic growth rate of Lombok Barat Regency with a regression coefficient value of -0.019585, which means that if PMDN investment in Mataram City increases by 1 rupiah, it will have an impact on reducing the economic growth rate of Lombok Barat Regency by -0.019585%. And it is known that the probability value of the PMDN investment variable is 0.4351 > 0.05, this value is greater than the 5% significance level (0.05) so it can be concluded that the PMDN investment variable in Mataram City has no significant effect on the economic growth rate of Lombok Barat Regency.

3. The Effect of the Economic Growth Rate of Mataram City (X2) on the Economic Growth Rate of Lombok Barat Regency (Y)

From the regression results, the coefficient value for the variable economic growth rate of Mataram City is 1.324136, meaning that if the economic growth rate of Mataram City increases by 1%, it will have an impact on increasing the economic growth rate of Lombok Barat Regency by 1.324136%. And the probability value of the variable economic growth rate of Mataram City is 0.0000 < 0.05 or smaller than the 5% significance level, so it can be concluded that the variable economic growth rate of Mataram City has a positive and significant effect on the economic growth rate of Lombok Barat Regency.

Based on the regression analysis that has been carried out in **Table 2**, the R-square value is 0.985556, meaning that the variable amount of PMDN investment in Mataram City and the economic growth rate of Mataram City can explain the dependent variable, namely the economic growth rate of Lombok Barat Regency, by 98.50%, while for 1.50% the dependent variable is explained by other variables not included in this research model such as inflation and government spending. Based on the regression analysis contained in Table 2 in this study, the partial test results for each variable are as follows:

4. PMDN Investment Variable of Mataram City (X1)

Based on the regression analysis that has been carried out, the probability value of the variable amount of domestic investment (PMDN) in the growth center of Mataram City is 0.4351 or greater than the $\alpha = 5\%$ level ($0.4351 > 0.05$), which means that H_0 is accepted and H_a is rejected. So it can be concluded that the variable amount of PMDN investment in the growth center of Mataram City has no significant effect on the economic growth rate of Lombok Barat Regency.

5. Variable Economic Growth Rate of Mataram City (X2)

Based on the regression analysis that has been carried out, the probability value for the variable economic growth rate of the Mataram City growth center is 0.0000 or smaller than the significant level $\alpha = 5\%$ ($0.0000 < 0.05$), which means that H_0 is rejected and H_a is accepted. So it can be concluded that the variable economic growth rate of the growth center of Mataram City has a significant effect on the economic growth rate of Lombok Barat Regency. The way to determine the simultaneous effect is by looking at the probability value of the F-statistic, if the prob F statistic value is greater than the value of the significant level, namely 5% or 0.05, then H_0 is accepted and H_a is rejected, meaning that all independent variables have no influence on the dependent variable, otherwise if the prob F statistic value is smaller than 0.05, H_0 is rejected and H_a is accepted, which means that all independent variables have an influence on the dependent variable.

Based on the F test results listed in the attachment, it shows that the probability value of the F statistic in this study is 0.000000 or smaller than the significance level of 0.05 ($0.000000 < 0.05$), which means that H_0 is rejected and H_a is accepted. So it can be concluded that all variables or variables of the amount of domestic investment (PMDN) and the economic growth rate of Mataram City together or simultaneously affect the economic growth rate of the hinterland region, namely Lombok Barat Regency.

3.6 Research Discussion

1. The Effect of PMDN Investment in Mataram City on the Economic Growth Rate of Lombok Barat Regency

Based on the results of the regression analysis and hypothesis testing, it was found that PMDN investment in Mataram City has a negative effect on the economic growth of its hinterland region, Lombok Barat Regency. The significance level of 0.4351 is greater than the α value of 5%, indicating that the effect is not statistically significant. The regression coefficient for PMDN investment is -0.019585, meaning that for every 1 rupiah increase in PMDN investment, the economic growth of Lombok Barat Regency decreases by 0.019585 percent. This finding contradicts the initial hypothesis, which posited a positive relationship between PMDN investment in Mataram City and the economic growth of Lombok Barat Regency. Furthermore, the results suggest that the increase in PMDN investment in Mataram City has more of a negative spillover effect, or a "backwash effect," on the economy of Lombok Barat Regency.

As described by Fatihin et al. [14], when the backwash effect outweighs the spread effect, it weakens the potential for a positive spillover. This study provides evidence that PMDN investment in Mataram City does not result in a positive spillover effect on the economy of Lombok Barat Regency. Myrdal's polarization

theory, which explains the impact of concentrated economic growth in a regional growth center, is applicable here. Myrdal also highlights the influence of capital movement, suggesting that the development of investment in a growth center like Mataram City can have a negative impact on the economic expansion of surrounding areas.

The increase in investment in Mataram City leads to the creation of new job opportunities, attracting labor from surrounding areas. However, the workforce required in the growth center is typically skilled, educated, and specialized in certain fields, which supports increased output and economic growth in Mataram City. As a result, Lombok Barat Regency may lose its skilled workforce, leading to a decline in output and, consequently, a reduction in economic growth. These findings align with the research conducted by Alfian et al. [15], which concluded that PMDN investment in Lombok Tengah Regency had no effect or a negative effect on the economic growth. Moreover research suggests that an increase in PMDN investment in Lombok Tengah has a stronger backwash effect, or negative spillover, on the economic growth. Similarly, a study by Etim and Daramola [16] found that investment in South Africa did not significantly impact the economic growth of the South Africa area. These results are consistent with the findings of this study, reinforcing the conclusion that PMDN investment in growth centers does not always lead to positive economic spillovers for surrounding regions.

2. The Effect of the Economic Growth Rate of Mataram City on the Economic Growth Rate of Lombok Barat Regency

Based on the results of the regression analysis and hypothesis testing, the economic growth rate of Mataram City has a positive influence on the economic growth of its hinterland, Lombok Barat Regency, with a significance level of 0.0000, which is smaller than α 5%. The regression coefficient is 1.324136, indicating that for every 1 percent increase in the economic growth rate of Mataram City, the economic growth of Lombok Barat Regency increases by 1.324136 percent. This result aligns with the hypothesis, which states that the economic growth rate of Mataram City positively affects the economic growth rate of Lombok Barat Regency. Geographically, Mataram City shares a direct border with Lombok Barat Regency and has excellent accessibility.

Lombok Barat also serves as a primary access point to other regencies in West Nusa Tenggara Province, including key infrastructure such as Lombok International Airport and Lembar Port. These factors support the economic growth of Lombok Barat Regency. Additionally, Mataram City is home to leading sectors such as wholesale and retail trade, real estate, corporate services, education, and manufacturing [17]. Residents of Lombok Barat Regency are thus able to work in these sectors in Mataram City. Moreover, the rapidly expanding trade and industry in Mataram City provide easier access for residents, businesses, and companies in Lombok Barat to obtain both primary and tertiary goods from Mataram City.

As a hinterland region, Lombok Barat Regency also contributes to the economic growth of Mataram City. The agriculture, fisheries, and forestry sectors, which have a significant contribution to the GRDP of Lombok Barat, supply essential raw materials such as vegetables, fish, fruits, and other products to Mataram City. This synergy supports economic growth in both regions. The theory of regional growth, which begins with the concept of unbalanced growth, implicitly includes the concept of regional spillover. According to the linkage effect theory by Hirschman [18], economic growth originates in the growth center and subsequently spreads to surrounding areas. This is demonstrated in the study's findings, as the economic growth in Mataram City creates a spillover effect that positively impacts the economic growth of Lombok Barat Regency.

These findings are consistent with previous studies, such as Zheng et al. [19], which found that the GRDP of Taiwan City had a significant positive spillover effect on the economies. Similarly, Barman [5] concluded that the economic growth of Siak, Pelalawan, Kampar, Kuantan Singingi, and Bengkalis districts positively influenced the economic growth of Pekanbaru City. Research by Amar and Pratama [3] also indicated that the economic growth of Metro City had a positive spillover effect on Bandar Lampung City, due to the synergy between the regions in agriculture and the goods and services sectors. Likewise, Suhartini et al. [20] found that the GRDP of NTB positively affected the GRDP of Yogyakarta due to the industrial interdependence between Lombok Barat dan Lombok Tengah.

3. The Effect of PMDN Investment and Economic Growth Rate of Mataram City on the Economic Growth Rate of Lombok Barat Regency

Based on the F test results, the probability value of the F statistic in this study is 0.000000, which is smaller than the significance level of 0.05 ($0.000000 < 0.05$). This indicates that H_0 is rejected and H_a is accepted, meaning that both independent variables, PMDN (Domestic Investment) and the economic growth rate of Mataram City, simultaneously have a significant effect on the economic growth rate of Lombok Barat Regency, the hinterland region. The results align with regional economic development theories, particularly the growth pole theory, which suggests that the economic development of a core region (in this case, Mataram City) often influences the economic outcomes of neighboring hinterland regions (Lombok Barat Regency). According to Hirschman's theory of backward and forward linkages, growth in a central region can create spillover effects through increased trade, investment, and employment opportunities in the surrounding areas.

Moreover, cumulative causation theory by Myrdal supports these findings, where growth in a core area spreads to peripheral areas, increasing economic activity. This process occurs when core regions develop stronger economic sectors, causing increased demand for raw materials, labor, and services from the hinterland, leading to improved economic conditions in the peripheral areas. The high coefficient of determination (R-Square = 0.98) indicates that 98% of the variability in the economic growth rate of Lombok Barat Regency is explained by the independent variables, suggesting a strong relationship.

These findings are consistent with several previous studies that explore the relationship between a growth center and its hinterland. Syafiuddin et al. [21] concluded that the Gross Regional Domestic Product (GRDP) of Mataram City had a significant positive spillover effect on the economic growth of Mataram City. Similar to this study, the core region's growth positively impacted its neighboring regions through employment opportunities, trade, and other economic linkages. Naraswari et al. [22] found that the economic growth of several districts, including Lombok Tengah, Timur and Lombok Utara, had a positive influence on the economic growth of Mataram City. The positive inter-regional economic relationships highlighted in their study reinforce the findings of this research, which shows that a core region can stimulate economic growth in peripheral areas. However, it is important to note that not all studies find positive relationships between core and hinterland growth. Arkaanjani [23], for instance, found that domestic investment in Mataram City had a negative effect on Lombok Utara, and investment in Lombok Timur Regency did not significantly affect the economic growth in the Lombok Utara region. These studies highlight the importance of specific local conditions, such as infrastructure, sectoral linkages, and workforce characteristics, which can either amplify or hinder the spillover effects of core region growth on the hinterland.

4. CONCLUSION

Based on the results and discussion of this study, it can be concluded that PMDN in Mataram City during the 2010-2022 period did not have a significant effect on the economic growth rate of Lombok Barat Regency partially. This indicates a backwash effect, where an increase in investment in Mataram City can reduce the economic growth of Lombok Barat Regency. However, the economic growth of Mataram City has a partially positive effect on the economic growth of Lombok Barat Regency, indicating a spread effect. Simultaneously, both PMDN investment and economic growth of Mataram City have a significant influence on the economic growth rate of Lombok Barat Regency. This indicates that changes in both variables can affect the economic growth of Lombok Barat Regency.

The PMDN investment and economic growth variables of Mataram City can explain most of the variation in the economic growth of Lombok Barat Regency by 98.50%. The remaining variation not explained by the model may be due to other factors not included in this study. Mataram City has both positive and negative impacts on Lombok Barat Regency, suggesting a spillover effect. Therefore, further study and wise management are needed to maximize the benefits of the growth of Mataram City without compromising the growth of Lombok Barat Regency. From the results of this study, it is recommended for the local government and the people of Lombok Barat Regency to make the best use of the positive impacts provided by Mataram City, such as employment and increased trade and services, while still paying attention to the impacts that

may arise. This is important to maintain the balance and sustainability of the economic growth of the two regions.

5. AUTHOR DECLARATION

Author contributions and responsibilities - The authors made major contributions to the conception and design of the study. The authors took responsibility for data analysis, interpretation and discussion of results. The authors read and approved the final manuscript.

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Declaration of generative AI and AI-assisted technologies in the writing process - During the preparation of this work the author did not use AI for writing, editing, or anything else related to the manuscript.

6. REFERENCES

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